FlyBy Math™ Alignment to
Nevada Mathematics Content Standards
February 25, 2003 Edition

Content Standard 2.0: Patterns, Functions, and Algebra
To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs) of patterns, functions, and algebraic relations as modeled in practical situations.

Variables (Unknowns)

Content Standard	***FlyBy Math*™ Activities**
2.12.3 Create and use different forms of a variety of equations, proportions, and/or formulas (e.g., I=PRT or R=I/PT), solving for the needed variable as necessary in given situations.	--Use the distance-rate-time formula to predict and analyze aircraft conflicts.

Algebraic Basics

Content Standard	***FlyBy Math*™ Activities**
2.12.5 Model practical problems from everyday situations with a variety of models that includes matrices, translating among tabular, symbolic and graphical representations of functions, with and without technology.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

Equation Solutions

Content Standard	***FlyBy Math*™ Activities**
2.12.7 Solve systems of two linear equations, both algebraically and graphically; use graphing calculators as a primary tool in solving these problems and to verify solutions found by other methods.	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.

Content Standard 3.0: Measurement
To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements.

Measurement

Content Standard	***FlyBy Math*™ Activities**
3.12.2 Select and use measurement tools, techniques, and formulas to calculate and compare rates, cost, distances, interest, temperatures, and weight/mass.	--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.

Proportion and Ratio	
Content Standard 3.12.5 Use relationships (e.g., proportions) and formulas (indirect measurement) to determine the measurement of unknown dimensions, angles, areas, and volumes to solve problems.	***FlyBy Math™* Activities** --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Use the distance-rate-time formula to predict and analyze aircraft conflicts.

Content Standard 4.0: Spatial Relationships and Geometry

To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will identify, represent, explain, verify, and apply spatial relationships and geometric properties.

Line, Slopes, and Linear Equations	
Content Standard 4.12.5 Use coordinate geometry to graph linear equations, determine slopes of lines, identify parallel and **perpendicular lines** and find possible solutions to sets of equations; use algebraic techniques to solve problems determined by geometric relationships.	***FlyBy Math™* Activities** --Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system. --Interpret the slope of a line in the context of a distance-rate-time problem.

Content Standard 5.0: Data Analysis

To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections.

Design	
Content Standard 5.12.6 Design, construct, analyze, and select an appropriate type of graph to represent data to communicate the results of statistical experiments (e.g., write a survey question and analyze and communicate the findings).	***FlyBy Math™* Activities** --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes. --Predict outcomes and explain results of mathematical models and experiments.